

Mineral Industry Surveys

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MOLYBDENUM IN MARCH 2003

Domestic production of molybdenum in concentrate in March 2003 was about 12% more than that of the previous month and was about 18% more than that of March 2002, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,250 metric tons at the beginning of 2003 and 7,690 metric tons at the end of March.

According to Ryan's Notes (2003), the March monthly averages for U.S. ferromolybdenum prices ranged from \$4.950 to \$5.275 per pound of molybdenum content, compared with \$4.863 to \$5.113 in February. European ferromolybdenum monthly averages ranged from \$11.813 to \$12.206 per kilogram of molybdenum content in March as compared with \$10.225 to \$10.638 in February. In March, worldwide molybdenum oxide prices ranged from \$4.513 to \$4.850 per pound versus \$3.906 to \$4.106 in February.

Molybdenum oxide prices stabilized at the end of March at about \$5 per pound as supplies of good-grade Western material were tight (Platts Metals Week, 2003c). Ferromolybdenum prices failed to keep pace, with business reported in the \$12.60-\$12.80 per kilogram range. With oxide prices at \$5 per pound, ferromolybdenum prices need to be above \$13 per kilogram to justify conversion of oxide to ferromolybdenum.

With the run-up in molybdenum prices, the Endako open-pit molybdenum mine at Fraser Lake, British Columbia, reportedly has returned to profitability. The mine continues to operate 24 hours a day aided by sub-freezing weather overnight that helps to stabilize rock on the sides of the pit. Endako is owned by Thompson Creek Mining Ltd. and Nissho Iwai Moly Resources Inc. (Platts Metals Week, 2003b).

Chilean producer Corporacion Nacional del Cobre, Chile (Codelco) reported that the molybdenum roaster plant at its Chuquicamata production site in northern Chile was shut down in early March for annual maintenance. The company expects the plant to resume operation by the end of the month and doesn't expect supplies to be affected by the scheduled closure (Platts Metals Week, 2003a).

References Cited

- Platts Metals Week, 2003a, Codelco roaster shut for a month: Platts Metals Week, v. 74, no. 11, March 17, p. 5.
Platts Metals Week, 2003b, Endako moly running 24 hours: Platts Metals Week, v. 74, no. 12, March 24, p. 5.
Platts Metals Week, 2003c, Moly oxide stable near \$5: Platts Metals Week, v. 74, no. 13, March 31, p. 11.
Ryan's Notes, 2003, [untitled]: Ryan's Notes, v. 9, no. 14, April 7, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2002	2003		Year to date
	January-December ^p	February	March	
Production	32,400	2,660	2,980	8,640
Shipments: ²				
Domestic	21,200	1,620	1,860	5,560
Export	11,100	1,030	1,060	3,020

^pPreliminary.

¹Data are rounded to no more than three significant digits.

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS¹

(Metric tons, contained molybdenum)

	2002	2003		Year to date
	January-December ^p	February	March	
Gross production	31,300	2,750	3,070	8,820
Internal consumption ²	20,700	2,760	2,340	7,250
Gross shipments	27,500	1,290	2,370	5,900

^pPreliminary.

¹Data are rounded to no more than three significant digits.

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2003, February:						
Steel:						
Carbon	11,000	W	--	--	W	11,000
High-strength low-alloy	28,500	12,900	--	--	--	41,400
Stainless and heat-resisting	198,000	59,900	--	--	8,520	267,000
Full alloy	94,300	176,000	--	--	2,380	273,000
Tool	68,800	W	--	--	W	68,800
Total	401,000	249,000	--	--	10,900	660,000
Cast irons (gray, malleable, and ductile iron)	W	16,000	--	--	763	16,800
Superalloys	44,700	W	--	(3)	97,100	142,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	1,970	--	--	6	1,980
Other alloys	131	--	--	--	6,350	6,480
Mill products made from metal powder ⁴	--	--	--	--	70,000	70,000
Cemented carbides and related products ⁵	--	--	--	--	11	11
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	13,000	13,000
Other	1,090	34,900	74,600	--	19,300	130,000
Grand total	524,000	302,000	74,600	--	217,000	1,120,000
Stocks, February 28, 2003	380,000	275,000	6,850	18,900	890,000	1,570,000
2003, March:						
Steel:						
Carbon	10,900	W	--	--	W	10,900
High-strength low-alloy	30,100	7,510	--	--	--	37,600
Stainless and heat-resisting	252,000	62,000	--	--	8,520	323,000
Full alloy	110,000	188,000	--	--	2,380	300,000
Tool	76,800	W	--	--	W	76,800
Total	480,000	279,000	--	--	10,900	770,000
Cast irons (gray, malleable, and ductile iron)	W	20,900	--	--	763	21,700
Superalloys	51,900	W	--	(3)	92,600	145,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	182	2,950	--	--	6,260	9,390
Mill products made from metal powder ⁴	--	--	--	--	105,000	105,000
Cemented carbides and related products ⁵	--	--	--	--	6	6
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	13,900	13,900
Other	1,090	33,900	75,300	--	21,100	131,000
Grand total	610,000	594,000	75,300	--	234,000	1,270,000
Stocks, March 31, 2003	347,000	280,000	6,280	39,500	884,000	1,560,000

W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes calcium molybdate.

³Included in "Other" of the "Superalloys" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metal working machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, gross weight molybdenum)

Country	2002	2003		
	January-December ^p	January	February	Year to date
Australia	46,900	1,250	3,000	4,250
Belgium	4,380,000	117,000	276,000	394,000
Brazil	32,600	759	4,330	5,080
Canada	1,080,000	124,000	128,000	255,000
Chile	16,200	7,000	1,210	8,210
China	56,700	--	--	--
Germany	64,400	--	--	--
India	141,000	10,900	--	10,900
Italy	47,900	--	5,670	5,670
Japan	1,130,000	59,800	75,400	135,000
Korea, Republic of	70,600	3,900	3,300	7,200
Mexico	484,000	373,000	424,000	797,000
Netherlands	7,330,000	568,000	472,000	1,040,000
Spain	41,200	--	--	--
Sweden	35,000	--	--	--
Taiwan	12,600	--	3,400	3,400
United Kingdom	4,330,000	445,000	289,000	734,000
Other	153,000	1,000	8,830	9,830
Total	19,500,000	1,710,000	1,690,000	3,410,000

^pPreliminary. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown

Source: U. S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹
(Kilograms, contained molybdenum)

Country	2002	2003		
	January-December ^p	January	February	Year to date
Australia	--	273	--	273
Canada	597,000	45,500	34,300	79,700
Chile	240	--	--	--
China	--	--	--	--
Denmark	5,110	--	--	--
Germany	--	--	--	--
Korea, Republic of	--	--	--	--
Mexico	51,400	--	--	--
Netherlands	--	--	25,500	25,500
Switzerland	21,800	--	--	--
Taiwan	274	--	--	--
Total	676,000	45,700	59,800	106,000

^pPreliminary. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown

Source: U. S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January-December 2002 ^p			February 2003		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	7,030,000	4,370,000	\$33,500	--	--	--
Ore and concentrates other	664,000	340,000	3,450	160,000	76,100	\$429
Molybdenum chemicals:						
Oxides and hydroxides	1,200,000	NA	7,660	147,000	NA	868
Molydates of ammonium	1,740,000	1,010	11,200	74,500	43,600	415
Molydates (all others)	435,000	88,600	1,630	42,000	5,360	103
Molybdenum orange	1,300,000	NA	5,490	61,700	NA	294
Ferromolybdenum	5,570,000	3,590,000	31,400	136,000	88,300	823
Molybdenum powders	39,500	31,700	11,100	6,870	5,570	198
Molybdenum unwrought	119,000	43,200	6,090	4,040	NA	293
Molybdenum waste and scrap	697,000	617,000	6,910	--	--	--
Molybdenum wire	14,600	NA	697	1,800	NA	121
Molybdenum other	9,250	NA	1,690	--	--	--
Total	18,800,000	9,080,000	121,000	634,000	219,000	3,540

^pPreliminary. NA Not available. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.